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[Continued on next page]

(54) Title: **ANTI-CD38 HUMAN ANTIBODIES AND USES THEREFOR**

Variable Heavy Chain DNA

3077_VH1B (SEQ ID NO: 1):

```
(1) CAGGTGCAAT TGGTTCAGAG CGGCGCGGAA GTGAAAAAC CGGGCGCGAG
(51) CGTGAAAGTG AGCTGCAAAAG CCTCCGGATA TACCTTTACT TCTTATTCTA
(101) TTAATTTGGGT CCGCCAAGCC CCTGGGCAGG GTCTCGAGTG GATGGGCTAT
(151) ATCGATCCGA ATCGTGGCAA TACGAATTAC GCGCAGAAGT TTCAGGGCCG
(201) GGTGACCATG ACCCGTGATA CCAGCATTAG CACCGGTAT ATGGAACCTGA
(251) GCAGCCTGCG TAGCGAAGAT ACGGCCGTGT ATTATTGCGC GCGTCGTTAT
(301) ATTTATTTTA TCCATGGTAT GCTTGATTTT TGGGGGCCAG GCACCTGTGT
(351) GACGGTTAGC TCA
```

3079_VH3 (SEQ ID NO: 2):

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(1) CAGGTGCAAT TGGTGGAAAG CGGCGGCGGC CTGGTGCAAC CGGGCGCGAG
(51) CCTGCGTCTG AGCTGCGCGG CCTCCGGATT TACCTTTTCT AATTTATGTA
(101) TGCAATTTGGT GCGCCAAGCC CCTGGGAAGG GTCTCGAGTG GGTGAGCAAT
(151) ATCTATTCTG ATGTTAGCTG GACCTTTTAT GCGGATAGCG TGAAAGGCCG
(201) TTTTACCAAT TCACGTGATA ATTGAAAAAA CACCCTGTAT CTGCAATGA
(251) ACAGCCTGCG TGCGGAAGAT ACGGCCGTGT ATTATTGCGC GCGTCGTTAT
(301) TGCTCTAAGT CTCATGCTTC TGTACTGAT TATTGGGGCC AAGGCACCTT
(351) GGTGACGGTT AGCTCA
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3080_VH3 (SEQ ID NO: 3):

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(1) CAGGTGCAAT TGGTGGAAAG CGGCGGCGGC CTGGTGCAAC CGGGCGCGAG
(51) CCTGCGTCTG AGCTGCGCGG CCTCCGGATT TACCTTTTCT TCTTATGTA
(101) TGCAATTTGGT GCGCCAAGCC CCTGGGAAGG GTCTCGAGTG GGTGAGCAAT
(151) ATCTATTCTG ATGTTAGCTG GACCTTTTAT GCGGATAGCG TGAAAGGCCG
(201) TTTTACCAAT TCACGTGATA ATTGAAAAAA CACCCTGTAT CTGCAATGA
(251) ACAGCCTGCG TGCGGAAGAT ACGGCCGTGT ATTATTGCGC GCGTAATATG
(301) TATCGTTGCG CTTTTCATTA TTTTGTGAT TATTGGGGCC AAGGCACCTT
(351) GGTGACGGTT AGCTCA
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3100_VH3 (SEQ ID NO: 4):

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(1) CAGGTGCAAT TGGTGGAAAG CGGCGGCGGC CTGGTGCAAC CGGGCGCGAG
(51) CCTGCGTCTG AGCTGCGCGG CCTCCGGATT TACCTTTTCT TCTAATGTA
(101) TGCTTTGGGT GCGCCAAGCC CCTGGGAAGG GTCTCGAGTG GGTGAGCAAT
(151) ATCTCTTATC TTTCTAGCTC TACCTATTAT GCGGATAGCG TGAAAGGCCG
(201) TTTTACCAAT TCACGTGATA ATTGAAAAAA CACCCTGTAT CTGCAATGA
(251) ACAGCCTGCG TGCGGAAGAT ACGGCCGTGT ATTATTGCGC GCGTTTATAT
(301) GGTATTTTTA ATTATGCTGA TGTTTGGGGC CAAGGCACCC TGGTGACGCT
(351) TAGCTCA
```

3077_1_VH1B (SEQ ID NO: 31):

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(1) CAGGTGCAAT TAGTCCAAAG TGGTGGGAA GTGAAAAAC CGGGCGCGAG
(51) CGTGAAAGTG AGCTGCAAAAG CCTCCGGATA TACCTTTACT TCTTATTCTA
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(57) Abstract: The present invention provides recombinant antigen-binding regions and antibodies and functional fragments containing such antigen-binding regions that are specific for CD38, which plays an integral role in various disorders or conditions. These antibodies, accordingly, can be used to treat, for example, hematological malignancies such as multiple myeloma. Antibodies of the invention also can be used in the diagnostics field, as well as for investigating the role of CD38 in the progression of disorders associated with malignancies. The invention also provides nucleic acid sequences encoding the foregoing antibodies, vectors containing the same, pharmaceutical compositions and kits with instructions for use. The invention also provides isolated novel epitopes of CD38 and methods of use therefore.

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